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LEADING ARTICLES

MATERIAL AND METHODS, THE SECRET OF SUCCESS IN LOCAL ANESTHESIA.*

ARTHUR E. HERTZLER, M. D.

KANSAS CITY, MO.

The continual search for new methods to produce local anesthesia indicates that those now in use are in some way unsatisfactory, and that there is a widespread desire among the profession to secure a better agent for the purpose. It is my intention in this paper to inquire into the essential features of a local anesthetic, to note in what particulars the available anesthetics fall short of the requirements and to offer some suggestions on a newer one.

The requisites of a local anesthetic may be summed up as follows: 1. It must be efficient, that is, it must produce anesthesia. 2. It must be safe within the limits required to produce anesthesia. 3. It must not poison the tissue so as to interfere with repair. 4. Anesthesia must last as long as the operation requires.

When we examine the available anesthetics in the light of these requirements we discover that we still lack an ideal anesthetic. In regard to these points it will be convenient to compare the drugs under two heads: (a) Cocain and its congeners, and (b) the drug to which I desire to call particular attention, quinine and urea hydrochloride.

1. *Efficiency.*—Cocain is efficient in that it produces anesthesia in any sensitive tissue with which it comes in contact. The difficulty is that the required amount soon goes beyond the limits of safety. Quinine, on the other hand, is safe in any required amount. It would be impossible to introduce into the system sufficient of the solution used, enough quinine to cause danger to the patient. This absolute safety adds also to its efficiency, for while not in itself more efficient than cocain, its safety makes it possible to use enough of the drug to secure anesthesia without fear of undesirable results.

2. *Safety.*—Cocain has long been known as a dangerous drug. The limit of safety has been placed by Wood as three-fourths of a grain. This is usually a safe limit, though cases are on record in which death occurred after the use of far smaller quantity. The drug may be said to have an element of danger even in very small amounts. This uncertainty makes it a measure inefficient since operators in their anxiety to remain within the limit of safety use too little to be effectual. On the other hand, it may be said for cocain that much larger amounts have been employed without fatal results. Schlesinger suggests that probably the drug when used in such large amounts either is defective, or has been reduced in toxicity by some method of sterilization. It is possible to use large amounts with safety when a part of the fluid escapes during the operation. The amount which is lost in this way obviously can never be accurately estimated. Quinine is effective under all circumstances and under all conditions. When brought in contact with sensitive tissue it produces perfect anesthesia. Owing to its effect upon protoplasm its rate of action varies with the conditions under which it is used.

3. *Wound Healing.*—Cocain does not interfere with the healing of wounds. Reports relative to disturbance in wound healing after the use of cocain are misleading and conflicting for in many cases the drug was in conjunction with other drugs such as adrenalin which would itself cause such disturbances. When large amounts of fluid are used as in Schelich's solution disturbance in healing is sometimes noticed. In

*Read before the Medical Association of the Southwest, Wichita, Kansas, October 11, 1910.

the absence of cocain or adrenalin large amounts of isotenic solutions may disturb healing. It seems to me that it is safe to say that in the amounts required to produce anesthesia cocain does not cause disturbance in wound healing. Quinine, on the other hand, does under certain conditions interfere somewhat with the ideal healing of wounds. This interference is due to the exudation of a granular fibrin which interferes with the formation of the plastic exudate which is the first step in the healing of wounds. This interference is not always present, is not infectious in character and is temporary in its action. It can nearly always be prevented by the proper use of the drug. It is characterized by a reddened thickening of the wound edges which become tense, but not painful spontaneously not on touch. There is an entire absence of leucocytic infiltration, the thickening being due entirely to the presence of fibrin. When leucocytic infiltration is present it is due to infection and not to quinine. The addition of from five to ten drops of adrenalin to an ounce of the quinine solution prevents the induration but also shortens the duration of the anesthesia and destroys the hemostatic effect of the quinine.

4. *Duration.*—Cocain anesthesia lasts usually from twenty to thirty minutes. This time is usually long enough for the performance of the majority of operations undertaken under local anesthesia. The duration of cocain anesthesia is, however, often under estimated, because in making sutures the needle is passed outside of the anesthetized area. Quinine anesthesia, on the contrary, is of much longer duration and lasts, broadly speaking, several days. This is sufficient for the performance of any operation, and also lasts beyond the period of after-pain following many operations. This in many instances is a matter of a great deal of importance.

In the question of material, therefore, we may sum up as follows: Cocain is preferable where a small amount of drug is sufficient and where the duration of the operation is brief and the certain rapid union is essential. Quinine is efficient in any amount, for any desired period, and is particularly indicated in operations where after-pain is great and where immediate union is either non-essential or immpossible, because of the character of the operation, or because of the nature of the tissue.

The Principles of Local Anesthesia.—In order to secure satisfactory results by the use of any drug certain definite rules must be observed. It is convenient to divide the methods under certain heads: 1. Topical application. 2. By injection (a) endermically; (b) subdermically; (c) nerve blocking; (d) perineural blocking.

1. *Topical Applications.*—In applying a local anesthetic to a mucous surface it is essential that the surface be free from foreign substance, so that the solution may be readily absorbed. The spray may be used when the surface is large, but when operations are to be done it is desirable to apply the solution by means of a cotton pledget. When cocain is used it should be confined to the field of operation in order that the danger of toxicity may be reduced to a minimum. When quinine is used there is no need of caution as to the amount used. A 10 per cent solution is effective in 10 or 15 minutes.

2. *By Injection.*—a. *Endermic Injection.*—In this method the needle is made to traverse the papillary layer of the skin. When the injection is properly performed the skin about the tip of the needle becomes blanched and slightly raised. Anesthesia is complete at once. This method should be employed whenever a simple skin incision is to be made.

b. *Subdermic Injection.*—In this method the solution is injected immediately beneath the skin. Edema is produced which raises the skin, but does not blanch it. Several minutes are necessary for anesthesia to become complete. This method is perferable when areas at a distance are to be anesthetized, as for instance, in injecting the base of inflammatory areas, tumors, or when fencing off an area for obtaining Thiersch grafts. This method is really a modified form of nerve blocking for it infiltrates nerves passing immediately subdermically.

c. *Nerve Blocking.*—In this method the nerve trunk is exposed in continuity and the injection made directly into its sheath. Anesthesia is usually complete after a few minutes throughout the area supplied by the nerves. This method is applicable whenever a terminal nerve can be reached. It is employed most frequently in the operation for hernia after Cushing's method. A less frequently indication for its use is in major operations on the extremities, and is here the only method of local anesthesia that can be used.

d. *Perineural Blocking.*— This method is used where terminal nerves too small to permit injection into the sheath are to be dealt with. Usually five to ten minutes elapse before anesthesia is complete, since the solution must be absorbed into the

sheath of the nerve before it can be effective. The most frequent use for this method is in blocking the nerves accompanying the spermatic cord in operation on the scrotal contents and in extending operations about the rectum.

In order to emphasize the principles above outlined specific operations will be mentioned and the principles of selection and use considered.

In small operations about the face where the cosmetic results are of importance cocain is preferable because the amount required is within the limit of safety and the duration of anesthesia is long enough for the performance of the operation. These operations include the removal of small tumors and the performance of slight plastic operations. Basal celled cancers of the face, the only cancer which it is permissible to remove under local anesthesia, are best operated under cocain. The same is true of operations upon the hands save that hand cancers are not suited to removal under local anesthesia, except by the method of blocking the nerve trunks.

For operations upon the tonsils quinine is the ideal anesthetic. The amount required to be efficient is beyond the limit of safety for cocain, and the duration of anesthesia is too short. Quinine, on the other hand, may be used in unlimited amount, the necessary healing by granulation removes the fear of a disturbed wound healing, and the duration of the anesthesia from four to ten days does away largely with the after-pain following the operation under cocain or general anesthesia.

Removal of the more extensive tumors about the neck, lipomas, bronchial cysts and mixed tumors; incision of infective processes; treatment of Ludwig's angina and other deep suppurative conditions, in all of which long duration of anesthesia is of great advantage, can be carried out satisfactorily under quinine. In these, as in other abscesses, the anesthetic must be first injected into the healthy tissue and the inflamed area gradually approached. If the inflamed area is suddenly injected the increased pressure causes acute pain.

Benign mammary tumors are best dealt with by the use of quinine. Should wound disturbance occur no damage is done for a slight additional scar is not of much consequence in this region. Large lipomatous tumors and wens on unexposed surfaces are satisfactorily dealt with under quinine.

Hernias may be satisfactorily repaired by the use of either drug. The amount of cocain used in Cushings method is within the limit of safety and the operation should be completed within the duration of the cocain anesthesia. On the other hand, the anesthesia by quinine does away with smarting usually present during the first few hours after the operation under cocain. The disturbance in wound healing usually absent when it does occur is limited to a slight thickening about the edges and is not a suppurative process. If quinine is used the use of the anesthetic should be limited to the skin and to nerve blocking. The fascia should not be injected. In strangulated hernia quinine should always be selected.

In operations upon the scrotum and in circumcision either drug may be employed provided that if cocain be used in any operation or sequence of operation the amount of drug used does not exceed the limit of safety. Thus a vein ligation or a circumcision can be done with safety under cocain, but if both these operations and a scrotal amputation is to be done at one sitting the limit of safety or cocain may be easily exceeded. Under these circumstances quinine should be chosen. My preference in these cases is for quinine because the slight disturbance in wound healing if it does recur, is more than counter-balanced by the absence of after-pain.

In operations about the anus quinine is the ideal anesthetic. Here, as in tonsillectomy, efficiency combined with absolute safety are secured and the absence of after-pain renders the anesthetic doubly valuable. Should thickening of the wound edges occur no damage is done since primary union is not sought. Any of the operations about this region can be done with this anesthetic. Cocain is suitable for the slight operations only. It is unsafe for the extensive operations because of the large amount of the anesthetic necessary.

Summary.—1. Cocain is efficient, does not disturb wound healing and lasts long enough for ordinary operations, but is dangerous. Quinine is efficient and safe, lasts long enough for any operation, but in some instances disturbs the healing process.

2. Cocain is to be chosen where the amount of solution required is small, uninterrupted healing imperative and the after-pain not great. Quinine is preferable where the amount of solution required is large and the after-pain great.

Dr. James Tyson has been elected Emeritus Professor of Medicine in the University of Pennsylvania, and Dr. Louis A. Duhring has been elected Emeritus Professor of Dermatology in the same institution.

TWO CASES OF ACUTE MANIA WITH UNUSUAL DURATION OF MENTAL OBLIVIOUSNESS—RECOVERY.

MARC RAY HUGHES, M. D.

ST. LOUIS.

Professor of Mental and Nervous Diseases, Barnes University; former Professor Criminal Anthropology, Benton College of Law; Associate Editor Alienist and Neurologist.

Your attention is especially called to these important conditions, because in both cases there is clinical food for thought. The two cases I refer to, one my own, and one of Dr. Nathan Raw, of Liverpool, England.

The first to which I will call your attention, is that of M. P. S., age 27. History fairly good up to time she became insane. Mentally she was unusually bright and a good conversationalist, a writer of fiction, etc. Her life had been of the ordinary kind with no great excitement until two or three years before the attack, when she was placed in such a position as to make it necessary for her to change her place of abode frequently, from one part of the world to another, fraught with no little excitement and hardships. About two months before the attack, she was more or less overcome with grief through the death of a relative, and after that up to the time I first saw her, she led a quiet life. She consulted me through her own volition, and seemed somewhat disturbed, but not enough to give me any undue anxiety as to her complete recovery. I went thoroughly into her antecedent history and could learn only of one aunt being insane, otherwise her mental history was fairly good. No other defects worth mentioning except some other slight psychosis that existed not in direct lineal descent. For the first few days she came to my office, seemed rational but very restless; spoke of her sleepless nights, not withstanding she was taking considerable bromide and chloral. I was inclined to disbelieve her. I spoke to her mother regarding the insomnia, who affirmed it, and also stated she would get up in the night frequently three times to change her night clothes on account of night sweats. There was no positive tuberculin reaction. In a few days she became obscessed, and I advised her mother to place her in a hospital. She did. The second day in the hospital she, instead of continuing her obscessions changed to delusions, and from then on, mild restraint was necessary until she lapsed into the state of obliviousness. She ran a temperature during the entire period, that is it was either above normal or subnormal, and her pulse would have its compensating range—high with temperature, and low with subnormal. Her reflexes were normal. She slept with her eyes half open and acted during the wakeful hours as one in a trance. After she elapsed into unconsciousness she required forced feeding for many weeks, but with much trying we finally got her to take liquid food in a mechanical way and likewise her medicine. She became so emaciated that I was fearful as to her ultimate recovery. Still there was no tuberculosis or any other wasting disease that I could detect. I kept her well nourished and frequently gave her as many as twelve raw eggs a day. By this time we, (I say we— I mean her nurse and myself) had gotten her to take anything we wished through suggestion. Her weight at this time was sixty-seven pounds and her height about five feet, four inches. After eleven months, she spoke to me the first word she had uttered since entering the hospital. She was rational but very weak, and from that day on she began to gain strength, and her mind became as clear as it ever was. The second month after she regained consciousness, she left the hospital, and now, four months have passed and she weighs 140 pounds, looks the perfect picture of health, and is vigorous and vivacious and happy. She still remembers her illness and part of the delusions she had during the long period of obliviousness, but speaks of them in a laughing way, as her unconscious state.

Dr. Raw's case is quite similar to mine and a detailed account may be found in the Journal of Mental Sciences, April 1910.

519 Metropolitan Building.

New York and New England Association Railway Surgeons.—The twentieth annual session of the New York and New England Association Railway Surgeons was held at the Hotel Astor, New York City, on November 3d and 4th, under the presidency of Dr. L. M. Bingham, of Burlington, Vt., chief surgeon of the Rutland Railroad. Dr. Jno. B. Deaver, of Philadelphia, delivered the Address in Surgery. The following officers were elected for the ensuing year: President, Dr. F. A. Goodwin, Binghamton, N. Y. first vice-president, Dr. Walter Lathrop, Hazelton, Pa. second vice-president, Dr. John W. LeSeur, Batavia, N. Y. corresponding secretary, Dr. George Chaffee, Brooklyn, N. Y. recording secretary, Dr. C. A. Pease, Burlington, V. treasurer, Dr. J. K. Stockwell, Oswego, N. Y.

FUNCTIONAL NEUROSES, CLINICALLY REVIEWED.*

WILLIAM F. WAUGH, A. M., M. D.

CHICAGO.

Dean and Professor of Therapeutics, Bennett Medical College (Medical Department, Loyola University).

I have repeatedly stated my view that the physician should not wait for the establishment of a name-diagnosis but should at once institute treatment as soon as he detects any aberration from normal functionation of any part. This is not in the least an effort to belittle the importance of diagnosis or to divert the clinician's attention from it, but quite the contrary—it demands that he pay more attention to it, study it in still earlier stages of illnesses, and at once make it the basis of his active therapeusis. It means that instead of contenting himself with the gross lesions displayed at the autopsy, he shall begin earlier to study the disorders of vital function and trace them to their causes during life. It makes physiology the basis of our work instead of anatomy; the living instead of the dead body.

It does more—it seeks to arouse the physician from his sterile 'scientific' lethargy, to convert him from a disinterested spectator into an active, masterful influence in the case. His function is to intervene as the Master. His is the science and the art of medicine; the knowledge of the situation and the ability to intervene effectively.

The study of diseased function brings us inevitably to the nervous system, in whose perturbations we note the first evidences of disturbing influences. From this we trace the disorder back to its cause, at first perhaps slight and readily removable, but which if left to go on unchecked may result in a conflagration. We are as yet on the threshold of these studies, and only when the body of our profession is aroused to the importance of the matter will we see really great progress made. The most significant work as yet accomplished is in the early treatment of some of the functional neuroses. These at least demonstrate the efficacy of potent remedial agents, when accurately applied to meet the indications presented clinically. Some examples of these applications may serve to illustrate.

Hyperesthesia.—D'Albas tells of a woman who was subjected to nervous pains resembling migraines occurring about every eight days, each spell lasting forty-eight hours, affecting each side alternately; the pains shooting, pulling, twitching, felt even in the orbits, sometimes as if the head would burst; the face red, eyes injected; accompanied throughout by fever. The appetite was nil; constipation habitual, uterus retroverted; tender on pressure below the 7th cervical vertebra, 1st and 2d dorsal; acute pain over the sacrum and coccyx, smarting pain and burning about the right shoulder, which was immovable, but not anchylosed. The wrist and phalangeal joints and the right leg were similarly affected.

Burggraeve attributed the malady to the cord, and advised revulsives, with camphor monobromide and cicutine to lessen spinal excitability; strychnine and hyoscyamine for the paretic spasm, gram 0.0015 of each per diem; the analeptic regime, quassin and soda arsenate at meals; iodoform as anesthetic, 3 milligrams in the morning and after dinner; for fever, aconitine 1 milligram and quinine hydroferrocyanide two every two hours.

Fournier describes the case of a girl of 27, to whom life had been constant suffering since puberty at 15. Everything was out of order, menses twice a month or not at all; dysmenorrhea, metrorrhagia, dysuria, hypersensitive ovary radiating intolerable pains, no appetite, no sleep, spasm of bladder and rectum.

Ordered hyoscyamine and strychnine gram 0.0005 of each every one-half hour; a laxative enema. Five hours later the urine, feces and menstrual flow all came at once, and complete relief ensued. She was then put upon strychnine sulphate and iron arsenate, and menstruation became regular, the color and appetite returned and strength increased. The ovary was still sensitive.

For this ovarian tenderness we have several remedies. When it remains after an inflammatory attack, gonorrheal or otherwise, the pain may be relieved and the absorption of debris stimulated by applying europhen in liquid petrolatum to the endometrium on a cotton-wrapped probe. Exosmotic tampons of cotton imbibed with pure water-free glycerin aid greatly here. But if the vitality of the pelvic tissues is too low to permit the institution of the reparative processes we may enhance this by local feeding—tampons saturated with sanguiferrin in the vagina, renewed twice a day. Meanwhile we may sedate the ovarian activity and soothe the tenderness by the use of gelseminine, pushed to effect, followed by helonin as an ovarian sedative-tonic.

Burggraeve mentions a bookkeeper, who awoke with violent heart-beating and suffocation which were calmed by ether. Next

*Address delivered before the Tri-State (Illinois, Iowa and Missouri) Medical Society, 1910.

day he had epigastric malaise, flatulence, pyrosis, bowels deranged, and albuminuria. There had been a late outbreak of sexuality. The diagnosis was hyperesthesia of the medulla, with genital reflex, extending to the heart and stomach. Ordered strychnine 0.0015, acontine, 0.0015, digitalin, 0,003, cicutine, 0.0015, at bedtime; a morning laxative saline, at meals quassin 0.003 and soda arsenate, 0.0015 each; a strengthening mixed regime; no fish, especially if spoiled; to abstain from coitus. The urine became normal, the dyspepsia ceased, the man got well. Cicutine here calmed the erotic tendency, the hyperesthesia and the heart. Strychnine toned the nervous system and restore self-control. Aconitine and digitalin regulated the circulation in the medulla, while quassin and soda arsenate acted as digestion regulators.

Hypochondria—Alphons' case was a farmer, aged 52; with constant cardiac pains, worse after meals and from emotion; the crisis occurring daily, lasting 4 to 12 hours. Erections were painful and provoked spasms of brain and heart; pain in the hypochondria, abdomen and epigastrium, worse in the heart. The urine deposited red acid. Coitus was very painful; the prostate slightly hypertrophied and sensitive. Exercise was insupportable, ennui great, he was melancholic and thought of suicide.

Diagnosis, hypochondria, with cholemic diathesis and enlarged prostate. Treatment, morning, laxative saline; quassin and acid pepsin at meals; hyoscyamine and strychnine hypophosphite as tonics and nervous calmants; quinine hydroferrocyanide for periodicity; mixed regime, gymnastics, hydrotherapy, tranquil diversions.

My own studies of hypochondria have led me to associate it with fecal toxemia and a hyperesthetic state of the prostatic urethra. The latter subsides rapidly under local applications of europhen in liquid petrolatum and the removal of this source of irritability is followed by improvement that is striking.

Burggraeve said: "When physicians had at their disposal only the uncertain medicaments of the old regime, one comprehends that they should act like the blind man of whom Barthez speaks, striking about him with his staff at the risk of wounding the passers-by (read, the patient). But today, since modern pharmacology has furnished the means, sure, swift and convenient, they are guilty of lese humanite if they do not employ them."

Hysteralgia.—Garau tells of a woman, aged 23, subject to paroxysmal attacks recurring every 15 to 30 days. These began with pressing pain in the epigastrium, compelling vomit, with distress between the shoulders. This was followed by a sense of intense cold, the changing to the hypogastrium and lumbar region, insupportable, like a tight girdle. The attack ended with a free discharge of limpid urine. Regular and homeopathist having failed, she had recourse to Garau. He found her with face injected, vultueuse, eyes brilliant, thirst intense, throat dry from constant crying, pulse vibrant and frequent, belly a little flatulent, pains very violent and lancinating, and vomiting. She threw herself violently about the bed in semi-delirium.

Gave hyoscyamine, 0.0005, cicutine, 0.0005, and morphine hydrochloride, 0.001, every ten minutes. The second dose produced calm and tranquillity, followed by a night's sleep. Next morning she was calm, though prostrated; the pain was gone. To prevent further attacks she took camphor monobromide and zinc valerianate, 5 centigrams each per diem, one each between meals. At the menstrual period she took hyoscyamine and ergot to favor the flow and relax the uterine neck.

From that time she had only slight menaces, before or after menstruation, that disappeared as by magic after one or two doses of the two last named remedies.

Burggraeve, "Hysteralgia comes usually by paroxysms, or, if the evil continues, by painful thrusts, distinctly accentuated, of paroxysmal character. The accesses occur spontaneously, at menstrual epochs, and endure as long as these. They are located within the pelvis, are buring or lancinating; walking, standing, defecation and miction sharpen the suffering; the contact of the finger with the os uteri in examination increases the pain. This is usually on the left side. Lying down brings marked relief. Sometimes the pains resemble violent uterine throes, and here the effects of hyoscyamine and strychnine are marvelous."

Hysteria.—Benito's patient was a woman of 48, married, hysteric since 10. She was found in bed, in an access of orthopea, the head thrown back, face cyanosed, hands clutching the throat, neck muscles contracted; cold, pulse small, anxiety extreme, asphyxia imminent. Gave with difficulty one milligram of iodoform, one of hyoscyamine, and one-half milligram strychnine arsenate; and repeated these in 15 minutes. Five minutes after the second dose she heaved a profound sigh, the cyanosis paled

and breathing became easier. This was followed in fifteen minutes by a milligram of hyoscyamine and one-half milligram of strychnine arsenate; and as the attack subsided, iodoform 0.001, and hyoscyamine, 0.0005, soon after which she sank into a tranquil slumber. In the morning she took a laxative saline, and was ready to be up and about. Ordered hyoscyamine and iron arsenate for a few days Except for some hysteric reminiscences the cure was complete.

Giraud's case was also 48, a maiden, subject since childhood to migraines. The change came at 47. Every March she was affected with general malaise, and free sweating, ending in swoons. The pulse rose to 115, the skin very hot, with crisis, convulsive movements, contortions of the face and neck, respiration impeded and pains varying every hour. Prescribed a laxative saline on awaking, a centigram of quinine valerianate every hour, a milligram each of aconitine and veratrine morning and night. This was continued six days, the fever moderating. Quinine hydroferrocyanide then replaced the valerianate, and when jerking of the facial muscles appeared 0.0005 of strychnine was given twice a day.

Thirteenth day. Stopped medication.

Twentieth day resumed quinine hydroferrocyanide, 20 centigrams in twelve hours. Treatment ended with iron arsenate for anemia. Perfectly cured.

Here the hallucinations and convulsions were due to a profound cerebral anemia. In a case of Burggraeve's there was vascular turgescence, with symptoms superficially similar, but requiring altogether different treatment.

There is no more interesting field for the physician's study than the so-called hysteria. Hysteria is never a diagnosis, always a symptom; and there is no case in which the symptom may not be traced to its real cause by skill and tact in the investigator. There may be almost any physical disorder, or moral cause, or the malady may be traced to one of the elemental needs or instincts of the human animal. It is exactly in these abnormally impressible constitutions that we find the best opportunities for study of disordered nerve function.

Drs. S. Grover Burnett and J. Elliott Royer, neurologists, have moved their office to the new Gloyd building, 91 Walnut street, Kansas City, Mo.

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EDITORIAL

Hospital Saturday and Sunday Again.

It takes a deal of courage to go through the first of the two days annually devoted to the hospital collection without acquiring a tag, and nothing but a firm conviction that this considerable contribution goes to a very limited charity could give one the courage to do it. It takes more courage to express the idea in type. Yet while it is a fact that there are a few physicians and a few clergymen who can get a worthy charity into our private hospitals, the rest of us can not; our cases, no matter how worthy, must go to the city hospital or to a college hospital. There is no reason to deplore the fate of those who have to go to the city hospital, as that institution is now conducted, nor of those who go to the hospitals run in connection with the medical schools, the service is excellently effective. Yet these institutions get nothing from the collection, though they are the ones which do the real, the big charity work. Many men and many women have come to look upon this annual collection as something beyond a nuisance; two years ago we heard several men say "never again;" last year (when not alone the office buildings, but the streets were infested with collectors) we heard many men say "never again;" and this year many *just didn't!* The collection this year is said to have fallen somewhat below that of last year. We are not surprised; the people are getting tired, or they have had dependent friends for whom they have tried to gain the service for which this money is supposed to pay in at lest part. The Hospital Saturday and Sunday collection is going to kill itself in time, and we are not at all convinced that this will be a misfortune, certainly the charitable work will go right along being done by the people who really do it. And it won't be those who make the big noise in the amen corner any more than it is now.

In so far as the motives of those promot-

ing this movement are right we bid them "God speed;" in so far as the money contributed goes to the purpose for which it was contributed we say "God speed;" and to those who are working among the poor, who are giving their time, their energy, their money for the alleviation of suffering and distress we say, "brothers, we are with you."

The Itinerant Vendor in Illinois and in Missouri.

In another department we have the pleasure of publishing a report of a recent decision of the Illinois Supreme Court settling the question as to the status of the itinerant vendor of medicines (and so-called medicines) in that state. In so far as Illinois is concerned this seems to make possible the putting of a quietus on the street fakir and all unregistered people who sell medicines of the class, and it is to be hoped that the profession of the state, aided by its intelligence generally, may see that this line of commercial activity is ended. The decision makes us mindful of what we have often had brought to our attention. What is the matter of our own State Board of Health? We seldom hear of the Missouri Board except in connection with that duty which concerns the conducting of the occasional examination of persons desiring to practice medicine and in efforts to control those who are practicing in the state; if they are busy with other things, as are the boards of other states, they are exceedingly quiet about it and the medical press of the state is not informed or encouraged to disseminate the information should it be acquired. The medical press of the state stands ready to cooperate with the Board in any endeavor which it may advance purposing a betterment of conditions medically. We have never discovered that the board desired any such assistance, nor that it purposed anything of a radical character in the way of endeavor. Speaking for ourselves, we have tried to have sent us the printed slip or Bulletin of the Board which tells of work done but we have never been able to get more than a single copy of a single issue. This is not encouraging. Now there are many things with which the Missouri Board should be busy, as are other boards. Would they command the aids which are theirs to command they might do the same effective things which are being done in other states. The examination of prospective practitioners is so far from the whole thing. Why is it that we get such frequent communications from the Illinois Board and the regular issues of its Bulletin (which is a journal of size and interest), unless it be that the Board of our neighbor state deems it profitable that we receive such communications? And why is it that the Illinois Board and boards of several other states are heralded in the press throughout the country for their activities if it is not a fact that they are more effectively active than is our own. All this talk of lack of funds and the like may have a very real basis, but the way to insure funds for activity is to be so busy that the funds will come. Now we can see no reason why the itinerant vendor should be legally outlawed in Illinois and not find himself similarly placed in Missouri, we would have liked it if we could have found oursevles some months ahead of Illinois in coming to the decision. And why shouldn't we have done so? There are a lot of reasons why people speak of "Poor Old Missouri," and the medical profession of the state has its responsibilities in the matter. Imperial Missouri is one of the grandest of the states, nothing is too good for her, she deserves loyalty of a kind she all too seldom gets. She should command activity to the very littlest detail from all her servants, from her Governor down to the very least of those who serve her, and her citizens should be enthusiastic in praise of the good gifts which she gives them. Missouri has plenty of good laws even should she pass none for several years, and she has laws relative to outcast medicine amply sufficient to place her among the foremost of the progressives were those in positions of power sufficiently anxious to see them enforced. St. Louis has explicit laws which preclude the possibility of the medical literature which is left at our doors and prohibits much of the medical advertising which appears in our daily press. When the State Board awakes and takes hold of these things an abundance of assistance will be forthcoming and a medical housecleaning will occur which should never have been necessary.

College Merger Again Under Consideration.

The lay press again announces that the merger of the Barnes Medical College and the St. Louis College of Physicians and Surgeons is being seriously considered. This is good, if true. We would gladly see the three independent schools of the city consol-

idated into one which could then enter into something like a competitive race with the two university schools. It will be regrettable if the proposed merger is not widened to include the American, though that school as reorganized seems to need such a move less than do those which are said to be considering it, and we doubt if its trustees could be interested at this time in the project. But the merger of the Barnes and the P. and S. is a consummation devoutly to be hoped for. The Barnes possesses the best building devoted to the teaching of medicine which is to be found in any but seaboard cities, and its laboratory equipment is excellent indeed, but it is not especially well located from a clinical standpoint, and it lacks just what the P. and S. enjoys as its stronger feature, clinics of size. Should the schools consolidate and, wisely, continue both plants, making of that on Lawton Avenue the scene of the chief laboratory and didactic instruction (but not neglecting to foster whatever of clinical work has been established there) and developing at the Gamble Street building a fullness of the clinical and hospital possibilities of that neighborhood, one can readily see how important a field the institution might occupy. We have always believed and voiced our conviction that St. Louis should have a medical school which is not affiliated with a university, an independent school, but we have never believed that there should be more than one such school, nor that the one should give courses which are any less effectively thorough than are those of the university schools. The suggested consolidation is or will be, if consummated, a decided step toward a most desirable improvement; it should mean another consolidation later, and it will if a few men are sufficiently whole heartedly and disinterestedly loyal to the aims and purposes of present day medicine.

The American Medical Association of Vienna.—An organization of medical men who are doing post-graduate work in Vienna, which includes several St. Louis men in its membership, and which was organized by St. Louis men, sends us greetings and bespeaks our interest in its work. The A.M.A. of Vienna is an important society. At present we have our Dr. M. W. Jacobs as its secretary, and Dr. C. H. Shutt on its executive committee. The Medical Fortnightly will be found on file in the reading room of the society.

THE REVIEWER'S TABLE

Books, Reprints, and Instruments for this department, should be sent to the Managing Editor, Century Building, St. Louis.

Serums, Vaccines and Toxines in Treatment and Diagnosis. William Cecil Bosanquet, M. A., M. D., F. R. C. P., Assistant Physician to the Charing Cross Hospital, Brompton, etc., and John W. H. Eyre, M. D., M. S., F. R. S., Bacteriologist to Guy's Hospital and in Charge of the Vaccine Department, etc. (Modern Methods of Treatment Series.) Illustrated. Second edition thoroughly revised. New York: Funk & Wagnalls Company, Publishers. (Price $2.00, net.)

The subject matter of this volume is of such vital interest to the profession at the present that its success is assured from the very fact of its appearance. The serums, vaccines and toxins have assumed a place of such importance in all that concerns our work, and the literature is not yet voluminous nor over practical. The authors have gathered their data from wherever authoritative information could be obtained, we notice with considerable satisfaction that they quote quite freely from the American literature. This information has been systematized and is presented in a form which makes it available for those who may not stop work and do laboratory work in the large cities. It is a valuable book and one which will demonstrate its usefulness.

An Anatomical and Surgical Study of Fractures of the Elbow. By Astley P. C. Ashhurst, M. D., of the Medical Department, University of Pennsylvania. Imperial octavo, 163 pages, with 150 illustrations. Philadelphia and New York: Lea & Febiger, 1910. (Cloth, $2.75, net.)

To the author of this important monograph was recently awarded the Samuel D. Gross prize of the Philadelphia Academy of Surgery. The great surgeon who established this perpetual incentive to research stipulated that the "prize should be awarded every five years to the writer of the best original essay illustrative of some subject in surgical pathology or practical surgery." This limitation to practical subjects ensures wide interest in the resulting monographs, and the substantial amount of the prize attracts many competitors, so that the award commends the successful work in advance to the attention of the profession. Already distinguished as a surgeon, Dr. Ashhurst has chosen a frequent injury, often complicated and difficult to treat and hitherto comparatively neglected, namely, fractures of the elbow. He has thrown new light upon the diagnosis and management of this lesion, and has presented many effective illustrations.

The Prevention of Sexual Diseases. By Victor G. Vecki, M. D., Ex-President San Francisco

German Medical Society, etc., with introduction by William J. Robinson, M. D. New York: The Critic and Guide Company.

Dr. Vecki is too well-known to medical readers to need introduction, nor does a book coming from his pen need commendation. What he demonstrates in this volume cannot better be expressed than he has done in his conclusion on his last page, i.e.:

"The damage done to humanity by contagious sexual diseases is enormous.

"The question of the prevention of venereal diseases has not received and is not receiving proper attention, though it would pay if the time and efforts of the best minds were devoted to its study.

"Hypocrisy and prudery have muddled the venereal, the sexual and all other social questions. The naked truth hurts some times, but it is our only salvation.

"Instruction means teaching the truth. To teach lies is no instruction. Teaching lies though done so extensively, has never advanced humanity. The truth must be told to everybody; to children to begin with.

"No one can be safe from venereal infection unless he knows all about it and is willing to use the knowledge to protect himself."

Hygiene and Public Health. By Arthur Whitelegge, C. B., M. D., B. Sc. (Lond.), F. R. C. P., D. P. H., and George Newman, M. D., D. P. H., F. R. S. E. New and revised edition. Illustrated. New York: Funk & Wagnalls Company, Publishers. (Price, $1.75, net.)

This very instructive and consequently valuable little volume considers all those points of public health and public hygiene which are at present occupying an important place in public and professional attention. The discussion of each topic is scholarly and includes all the latest advances and most approved procedures for the preservation and re-establishment of public health. The authors write from the standpoint of their nation (the English), but they have prepared a text admirably suited to American use; the legal phases of the subject mentioned are English but their appearance is important in that it leads to comparison with our own laws. The book should have a place among the working volumes of every well selected medical library.

The Physicians' Account Book. By J. J. Taylor, M. D. 212 pages. Leather. Philadelphia, Pa., 4102 Walnut street: J. J. Taylor, Publisher. (Price, $1.00 postpaid.)

The especial feature of this book is a system of accounts whereby each transaction can be recorded in a moment's time in plain language, so that it is strictly legal as evidence in court without personal explanation, and so arranged that any patron's account can be ascertained on demand without any posting. There is only one entry of each transaction, and this in such a form that no posting is ever required. It saves time, labor and worry, and insures that your accounts are always up to date, so that you can send statements out every month without any delay and can inform any patron, wherever you may meet him, of the exact state of his account. This feature alone in the course of a year will secure payments for you — that would otherwise be missed—sufficient to buy your account books for a whole lifetime. It is the simplest, quickest and easiest legal account system on the market.

The book also has some easy and practical directions for billing and collecting, some excellent business and legal hints, some valuable forms for emergency use, such as "dying declarations," forms for wills," etc., an average medical and surgical fee bill, besides miscellaneous tables, clinical directions, etc. Having a good cash account department and various clinical records—vaccinations, deaths and confinements—it forms a complete year book for the physician's pocket.

For those who prefer to keep their accounts at the desk, the same system has been enlarged into a desk size book of 400 large sized pages, the price of which is only $5.00 per copy.

Hospital for Negroes.—The colored population of Springfield, Mo., have decided to build and maintain a hospital for negroes, to be known as the Dunbar Hospital. An association has been organized to collect the necessary means.

Dr. Millican Goes to the London Lancet.—Dr. Kenneth W. Millican, who has been for some years prominently concerned in American medical journalism and has done much to raise its standard, sailed recently for London where he is to assume a position on the editorial staff of The Lancet. The flattering call must be very satisfying to the doctor, we believe that his connection with the Lancet is a matter for self-congratulation to the American profession, he has taught us much of England, he will now teach the English our side of the story. A letter written us just before sailing expresses great regret that a hasty departure made it impossible for him to express his adieus individually to his many friends on this side.

SOCIETY PROCEEDINGS

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

Thirty-sixth Annual Meeting, held at Detroit, September 13-15, 1910.

(Continued from page 468.)

Role of the B. Coli Communis in Acute and Chronic Dilatation of the Stomach.—Dr. F. B. Truck, Chicago: The B. coli plays a part in the gastrointestinal tract in producing lesions in the liver, kidney, stomach and other organs. Experiments were begun with intravenous and intraperitoneal injections into dogs, rabbits, guinea-pigs and rats. The results obtained were variable and inconstant. On feeding animals with bouillon cultures of the B. coli daily over a period ranging from 3 to 14 months lesions were found in the stomach, duodenum, liver, kidney, brain and spinal cord, varying according to the methods, quantity and character of culture. It was found that animals fed with cultures of B. coli would acquire acute or chronic dilatation of the stomach by overworking or overloading the stomach. Examination of the blood showed that it remained sterile during the experiments, and the heart's blood at death was also sterile. In feeding cultures of the bacillus pronounced changes were revealed in the blood and tissues. Agglutination of B. coli by the dog's serum was noted; hemolysis of the blood was evident; cytolysis and autocytolysis of the cells of the mucous membrane of the stomach, kidney, liver and other organs were marked on microscopic examination. But there was no bacteriemia, no inflammatory reaction in the form of round-cell infiltration, such as one would expect in a reactionary inflammation induced by pyogenic micro-organisms or toxins. It was not the picture of reaction to an infection, but rather a systemic condition of induced cellular change. When feeding was continuous, an acute process was the characteristic picture. When feeding was stopped, the lesions healed. If the feeding was interrupted for a considerable period at short intervals, then resumed, chronic lesions were produced, with round-cell infiltration. It would seem that chronic lesions were simply acute processes interrupted at certain intervals, or a series of acute processes. To obtain spontaneous acute or chronic dilatation of the stomach in animals, it was necessary to feed the animals with cultures of B. coli over a long period of time, followed by over-use of the stomach, especially increasing the intragastric pressure. The usual methods of treatment are gastric lavage; diet frequent, but light meals; drugs, such as tonics, laxatives, alkalies, or acid, as indicated; electricity and exercise; hydrotherapy, balneology, rest and recreation. On the failure of these methods surgical operation is indicated.

Acute Abdominal Manifestations of Syphilis.—Dr. Louis A. Levison, Toledo, Ohio, read a paper on this subject which he summarized as follows: 1. Syphilis, showing acute abdominal manifestations is not uncommon, but is not generally recognized. 2. The liver is the organ most often affected. 3. Abdominal manifestations occur more often in the tertiary stage. 4. Syphilis of the stomach can simulate most of the ordinary gastric diseases. 5. The symptoms of acute abdominal manifestations of syphilis are in no way diagnostic and include pain, tenderness, fever, jaundice, chills and sweats. 6. The gastric crises of tabes may be considered syphilitic in nature.

Etiology of the Functional Neuroses.—Dr. Eleanora S. Everhard and Dr. Gertrude Felker, Dayton, Ohio, contributed a joint paper on this subject, in which they drew the following conclusions: 1. The common element in the attributed causes of the functional neuroses is to be found in the fact that the mental processes are not directed; therefore, the patient is the victim of any stimulus which chance may keep before the mind, and that there is no limit to the destruction of efficiency which may result. 2. Those symptoms commonly called nervousness are worthy of serious consideration because they indicate some degree of lack of control of nerve processes. 3. Self-indulgence by training the mind to follow the lines of least resistance, predisposes to these neuroses. 4. The value of living in accord with the laws of hygiene cannot be overestimated, both because of its influence on nutrition, and because it requires a measure of self-control, but that alone is insufficient. 5. Conditions of life which demand of the individual, in his vocation or avocation, less exercise of attention and will than he is capable of enduring without fatigue, bear to his nervous system the same relation that lack of muscular exercise bear to his muscular system. 6. Intelligent education at any age is effective, but since the ideal is prevention, the habit of directing mental processes should be established early.

Standardization of Bacterins.—Dr. R. T. Petitt, Ottawa, Ill.: The value of bacterin

therapy as a general aid to local treatment in certain types of bacterial infections is pretty well established. In the preparation of vaccines I do not try to estimate the number of bacteria present in a given volume. I take up a twenty-four hour blood agar growth of streptococci in a definite amount of salt solution, shake thoroughly, centrifuge to throw down the clumps, put in a bottle specially prepared and kill by heat or carbolic acid. Then I make a 1-10 of 1-100 dilution of this full emulsion and give an initial dose of 5 c.c. of the 1-100 dilution. This induces very little or no reaction. The dosage is then increased up through the 1-100 dilution and full emulsion to the point of local reaction. Then I proceed slowly, keeping in mind that the reaction induced and results obtained are the true indices of dosage. The reaction to be aimed at is a slight or moderate local reaction, an area of redness about the size of a dollar, without the localizing or general phenomena. By using increasing doses up through a series of dilutions this can be procured with a fair degree of accuracy and an estimation of the number of bacteria used is entirely superfluous. The full emulsion can be called 100 per cent and 10 per cent and 1 per cent dilution of this full emulsion may be made. The doses can be recorded as 1, 2, 5, 7 c.c., etc., of the 1 per cent, 10 per cent or 100 per cent emulsions. The advantages of a dilution method of estimating bacterial suspensions over a numerical are several. 1. The reaction, the real index of dosage is relied upon and the empirical administration of bacterins is made less possible. 2. An index of antibody production is aimed at. 3. By using this method vaccines can be prepared with much greater rapidity, at least an hour is saved on each bacterin prepared, and if bacterins prove to be of value in acute infections—and the recent work of Dr. Rosenow, of Chicago, on artificial immunization in pneumonia seems to point in this direction—the time saved will be an important factor.

Treatment of Pernicious Anemia Associated with Achylia Gastrica.—Dr. A. C. Croftan, Chicago, submitted a clinical report in regard to the treatment of a certain group of pernicious anemia cases and described three cases in which the patients had been improved rapidly and have remained symptomatically well, without remissions, to date. The one constant factor seen in the cases of pernicious anemia observed during a period of years that were not distinctly attributed to the effect of syphilis, carcinoma, parasites or profound and continuous loss of blood was a lack of hydrochloric acid from the stomach contents, associated with a variety of digestive disturbances, allied with varying degrees of chronic undernutrition. That all cases of hyperchlorhydria and all cases of chronic undernutrition do not develop pernicious anemia calls for the inclusion of some specific factor or factors, hitherto unknown. At all events, the supplying of large quantities of hydrochloric acid, together with abundant proteids by mouth or by rectum, seemed a favorable point of attack and was persistently carried through with gratifying results. From the results obtained, the conclusion was drawn that a trial of this plan in this group of cases is decidedly worth while and seem to produce results not otherwise obtainable by any means so far described.

MEDICAL ASSOCIATION OF THE SOUTHWEST.

Fifth Annual Meeting, held at Wichita, Kan., October 11-12, 1910.

(Continued from page 470.)

New Method of Cure for Pelvic Infections in Women.—Dr. J. F. Kuhn, Oklahoma City: Peritoneal infections of the pelvis are easily controlled, because with the Fowler position the infectious material is confined to the pelvic cavity, where toxins are more slowly absorbed than in the upper peritoneal regions, and in consequence the system produces antibodies rapidly enough to counteract their effects. I wish to lay special stress on the treatment through the rectum with normal saline solution. By the method I suggest, the rectum is distended at hourly six periods with from one to four pints of the solution at 105 F., the quantity being gradually increased as tolerance for a larger amount is established. Intermittent periods of hyperemia are produced, thus hastening the destruction of the infecting organisms, inducing more rapid absorption of the resultant plastic lymph, and preventing the formation of dense adhesions so commonly seen in the neglected cases. It has all the other advantages of normal saline solution stimulating and aiding the emunctories in ridding the system of the products infection; fortifying the system during its struggle to produce antibodies and finally, by the action of heat locally, relieving the patient of the distressing pain which is the chief complaint. One patient suffering with streptococcus puerperal sepsis was delivered

March 10, 1910, and five days later had a chill with high fever and great tenderness throughout the whole pelvis. She was placed on this treatment until March 31, when the saline was withdrawn for a few days, to be continued thereafter at twelve hourly intervals. She made a complete and uninterrupted recovery.

DISCUSSION.

Dr. A. E. Hertzler, Kansas City, Mo.: In the first stage of gynecologic gonorrhea, the women are put to bed, their bowels are moved, and practically nothing more is done. The result of this line of treatment runs something like this: About two-thirds of the patients recover their health; about one-quarter of these two-thirds will conceive. The remaining third will come to operation. At the end of the first few days there will be a leucocyte count of from 15,000 to 25,000, which will drop down to normal in two or three weeks; this drop is preceeded by a drop of the temperature to normal. The temperature falls to normal usually ten days before the leucocyte count does. I have obtained excellent results from the use of autogenous serum in chronic cases of gonorrhea; but experience with the stock serum has not been satisfactory.

Dr. J. A. Walker, Shawnee, Okla.; I have not tried the method outlined by Dr. Kuhn. Usually within a reasonable time inflammation of the Fallopian tubes will subside and incarcerate itself by the adhesions of the fimbria and, ordinarily, by occlusion of the uterine end of the tube. The pus cavity will thus be isolated from the general peritoneal cavity, though not sufficiently to prevent the formation of strong adhesions to the surrounding tissues. So long as adhesions are present the patients are going to have trouble. If the inflammation is of a streptococcus nature, the adhesions are more liable to be dense than if they are from the Neisser coccus; and when the adhesions are so strong and dense, I do not believe it is wise to be too conservative and wait too long before breaking them up and removing the foreign body, which an old collapsed occluded tuber is bound to be. My practice has been to wait a reasonable time for the inflammation to subside and, perchance, for the pus after having become sterile to be reabsorbed. If I think such a thing has not occurred, I remove the tube, leaving all ovarian tissue possible.

Dr. J. D. Griffith, Kansas City, Mo.: We know how dangerous infection is from the Niesser coccus and how frequently we meet it. I have used the serum in these cases, and I have used the knife. I have resected the tubes and tried to save organs that I thought would functionate, but the treatment Dr. Kuhn has outlined in the acute stage of filling up the rectum with normal salt solution, with the patient in the Fowler position, I have never tried, but in the next case which presents itself, I am going to do so.

DR. M. L. PERRY
PARSONS, KAS.
President Medical Association of the Southwest

Next Meeting at Oklahoma City, October, 1911.

Dr. J. F. Kuhn, Oklahoma City: If in a community not larger than Oklahoma City I can treat a series of twenty-eight cases with the treatment I have outlined without a failure Dr. Griffith and others can certainly achieve the same results in the larger communities in which they practice. I hope they will try the method.

Treatment of Patients Desperately Ill in Consequence of Accident.—Dr. Charles E. Bowers, Wichita, Kan.: Many of these patients seem to be beyond hope; others recover notwithstanding shock, hemorrhage, or infection, which may be present. In such cases it becomes necessary to do what we can to save lives that are thus jeopardized, and prompt and efficient intervention is demanded. In treating shock the first therapeutic agent indicated is something that will raise the body temperature, and the best heat is dry or moist. Perhaps a hot bath will do most. The second thing to do is to lower the head in order to improve the circulation of the brain, which has much to do with shock; with better

brain circulation the patient will soon recover from shock. The third thing to do is to re-establish the normal specific gravity of the blood, and that can be done by saline solutions subcutaneously or by the rectum, or by the transfusion of blood.

DISCUSSION.

Dr. Howard Hill, Kansas City, Mo.: The various manifestations of lowered blood pressure, such as anemia, can best be met by the use of normal saline solution; the application of heat externally, and the internal administration of salines constitute practically all that has to be done. Morphin is beneficial in many cases of shock. It cuts off the afferent impulses.

Dr. John Punton, Kansas City, Mo.: From whatever the shock may come, to whatever the injury may be done, the prognosis is always as important as the treatment itself. Shock spends its force on the vital organs, hence we have a disturbance of the pulse, the temperature and respiration. I have found that shock is attended with more or less loss of consciousness, and the question of prognosis in the presence of loss of consciousness is often a very perplexing one to the surgeon as well as to the internist. There is no surgical rule that enables the surgeon to tell positively whether the prognosis is favorable or not, but I have found that a good rule to adopt in such cases is not to lengthen the time the loss of consciousness is present. The generally accepted view is that the longer the duration of the loss of consciousness the less chance there is for recovery. As a general rule that is true, but it is subject to so many exceptions that it is worth while for us to remember that in the presence of shock, and in the presence of loss of consciousness due thereto, the respiratory center plays a more important role in the prognosis than does the temperature or the increased pulse when there is a question as to prognosis; therefore, it is wise to remember that the increased respiration is a very much more unfavorable sign than either the raised temperature or the accelerated pulse, and if the surgeons will adopt that rule, they will give a favorable prognosis when they might otherwise be led in the loss of consciousness to give an unfavorable one.

Dr. George A. Boyle, Enid, Okla.: I think the personal element enters into every case of shock. There are individual characteristics. Phlegmatic persons will stand more injury with greater shock and recover than others who are highly organized, nervous individuals. After twenty-five years experience I am unable to determine just what the prognosis in a given case of shock is going to be.

Dr. D. A. Myers, Lawton, Okla.: In cases of infection in which the pulse and temperature are divergent, by giving a bad prognosis one will be on the safe side. But as soon as the pulse and temperature begin to harmonize, it is safe to encourage the patient. The outlook is more favorable.

[To be continued.]

In "clean" surgical cases a rise of temperature to even no more than 99.5 deg. or 100 deg., during convalescence after operation, always means something – it may be only serous retention. —Amer. Jour. of Surg.

Practical Points in the Management of Poliomyelitis and its Sequelae.—Henry Ling Taylor, New York (Med. Rec., Oct. 15), thinks that time is wasted in treating anterior poliomyelitis with massage and electricity. These agents have little effect. The prevention of deformities and their correction is of the utmost importance. But rest in bed should be maintained for a long time in order to prevent stretching of the affected muscles by the weight of the paralyzed limbs. Many cases of scoliosis in young adults have been traced to an early attack of poliomyelitis. The abdominal muscles are often affected and contribute to the scoliosis. It has been shown that an extensive small celled infiltration surrounds the vessels of the infected area; that the cord is edematous; that the motor cells atrophy secondarily; that the pia of the spine, bulb, and base of the brain are involved, even in cases showing no meningeal, bulbar, or cerebral symptoms. There are many quickly fatal cases, as well as cases without paralysis. The author has notes of cases showing aphonia, dysphagia, ocular and facial paralysis, and temporary paralysis of the bladder and rectum. Apathy and moderate stiffness of the head are common. Abdominal paralysis is quite common. As soon as the acute symptoms have subsided measures should be undertaken not to allow of stretching of the paralyzed muscles by the weight of the limbs. Support should be fitted. After deformity has taken place it is important to correct it by apparatus and operations. There is no advantage in exercising the opposing muscles, but quite the reverse. Improvement may be obtained even in cases of long standing by these measures, and a fair amount of motion obtained by careful balancing of the muscles.

ABSTRACTS

Chemical Problems in Diabetes.—Adolf Mangus-Levy, Berlin (Medical Record Nov., 19, 1910), says that by glyconeogenesis we understand the formation of carbohydrates, especially grape sugar, from molecules which are not carbohydrates, such as protein and fats. The classical method for recognizing glyconeogenesis is the examination of diabetic subjects. In them the sugar excreted by the urine is greater than the glycogen which has been stored up. Pfluger's experiments were carried out on a very large scale and he helped to establish the fact of glyconeogenesis today. Sugar may be produced from protein, glycerin, and fatty acids. The formation from porteids is established. In most cases an increase of fats ingested does not cause increased excretion of sugar. Fats have no power to expel other food materials from the metabolism and take their place, in contrast to protein. Neutral fats are composed of glycerin and fatty acids. Sugar is undoubtedly formed from glycerin, less certainly from the fatty acids. The author believes that sugars are formed from fats, but in a small amount. The protein molecule is made up of innumerable glycocoll groups. Plant proteids yields less sugar than animal proteids, but they cannot be substituted for animal proteids in nutrition. The recent experiments of Graham Lusk go to show that glycocoll, alanin, aspartic acid, and glutaminic acids are transformed into one another; the different sugars may be thus changed. A question of importance is whether a carbohydrate would be preferred in the system to grape sugar and utilized to a greater extent. In light cases of diabetes levoulose and galactose are to be preferred to dextrose. In more severe cases this advantage disappears. The clinical significance of levulosuria is small. The pentoses are not transformed into glucose. The oat-meal cure, although it has not yet been explained theoretically, is of value.

Bacteriology of Acute Respiratory Infections in Children.—L. Emmett Holt, New York (Journal A. M. A., October 8), publishes his more recent studies on the bacteriology of the acute infections of the respiratory tract in children. In a previous paper he had pointed out that the bacillus influenza played an important part in respiratory infections, especially in winter and early spring, but disappeared during the warmer months. He has somewhat enlarged his research, and included observations on the occurrence in the respiratory tract secretions of the pneumococcus, influenza bacillus, the staphylococcus and streptococcus. The diphtheria bacillus and micrcocccus catarrhalis are not included, though they were noted when present, and a detailed report prepared in regard to the latter. Between September, 1909, and June 1, 1910, he made over 1,100 cultures from 500 patients and 30 nurses and attendants; also cultures from lung and heart blood in 85 routine autopsies. The patients were from the Babies Hospital, and mostly under 3 years of age, and the results are given in tabulated form. Four groups of patients are included: (1) those with pneumonia, mostly of the acute primary type, bronchopneumonia predominating; (2) those with bronchitis and other respiratory infections for the most part mild; (3) those with pulmonary tuberculosis; (4) those with non-respiratory diseases, and included in this group are thirty nurses and attendants. Pure cultures were never seen, though a dominant one was present in many cases. In all the groups in fact, the predominance of the pneumococcus and of the staphylococcus aureus is notable, while the bacillus influenzae percentage is considerably less than that of the preceding season. The streptococcus was rarely predominant, though occurring usually in small numbers in over half of the patients and in one-third of the cultures taken. That the character of the infection in bronchitis is essentially the same as that in pneumonia is not generally appreciated. In the second group of mild cases, the relative frequency of the different germs in cultures was about the same as in the first group, except a little larger percentage of influenza cases. In the tuberculous cases the percentage of influenza is still higher, while the pneumococcus and staphylococus predominate. In the non-respiratory cases the staphylococus was found in about 85 per cent and the streptococcus in about half that number. It is worth noting that 52 per cent of the patients showed the pneumococcus and the proportions of influenza fell the lowest of any of the groups. He has appended the results of cultures from 57 cases of acute otitis. About half of these patients showed the influenza bacillus in throat cultures, but only four of them showed it in ear cultures. With the mixed character of the infection in all these cases, it was often impossible to connect the clinical symptoms with definite findings. There were very few cases of typical acute pneumonia and there was no definite modification of the symptoms observed with the presence of the streptococcus, except in a few cases of

exceptional severity. The influenza bacillus seemed to complicate and cause irregularities when it occurred, and several fairly distinct clinical types were associated with it, which are described. It was more frequently associated with symptoms of the lower than of the upper respiratory tract and, in general, mild, general symptoms, irregular physical signs and marked temperature variations. A number of cases are reported. Holt thinks that the influenza bacillus plays a considerable role in the respiratory diseases of young children. He is more doubtful of the influence of the streptococcus and the staphylococcus, but reports a case which made quite an impression on him, of broncho-pneumonia with otitis apparently cured by staphylococcus vaccine. The necropsy findings correspond with the clinical findings by sputum cultures in the main. The mixed infections were found in a great majority of cases. In conclusion, he rather emphasizes the significance of repeated findings of the bacillus influenza in sputum cultures, in the winter and spring season at least.

Public Provision for Consumptives Doubled.—Sixteen State sanatoria, twenty-eight county hospitals, and twenty-one municipal hospitals for tuberculosis have been erected and provided for since January 1, 1909, says a bulletin of the National Association for the Study and Prevention of Tuberculosis. Within the last two years the number of State institutions for tuberculosis has doubled, and the number of county and municipal institutions has increased from about thirty to eighty. The expenditure of public money for the treatment of tuberculosis also has more than doubled. Not less than $3,000,000 of State money was appropriated for tuberculosis institutions in 1909, when forty-three legislatures met, and over $600,000 in 1910, when only eleven legislatures were in session. The appropriations of counties and cities for tuberculosis hospitals and sanatoria in the last two years will aggregate fully $2,500,000, bringing the total of official appropriations for tuberculosis hospitals up to over $6,000,000 in the past two years. In spite, however, of this good showing, the National Association for the Study and Prevention of Tuberculosis states that not one-tenth of the public provision for tuberculosis that is needed has been made. More than 250,000 tuberculous patients are constantly without proper institutional treatment.

MEDICAL MISCELLANY

James K. Polk Taylor, a former slave 71 years old, and his wife have given 480 acres of land at Calhan, forty miles east of Colorado Springs to the Charles Sumner Tuberculosis Association, as a site for a national tuberculosis sanitarium for colored people. It is understood $300,000 will be spent on the sanitarium.

Red Cross Endowment.—The $2,000,000 endowment fund for the Red Cross in the United States is in a fair way to be realized by the appointment of committees throughout the country to raise definite apportionments. In New York City practically the entire amount apportioned, $500,000 has already been subscribed.

Jefferson Alumni in Missouri.—Missouri graduates of Jefferson Medical College have organized the Jefferson Alumni Association of Missouri, with provision for corresponding members in Illinois, and invites the alumni of Jefferson in these states to become members. Dr. William Porter, St. Louis, is president and Dr. A. T. Muench, St. Louis, secretary.

Complete Addition to Sanatorium.—The west wing addition to the sanatorium at the City Insane Asylum has been completed, and all insane patients housed in the infirmary have been transferred to the sanatorium. The quarters vacated by the insane patients will be occupied by the patients, hitherto cared for at the Female Hospital.

Plague in China.—Serious riots occurred in Shanghai on November 11, in connection with the sanitary work for the prevention of the spread of the plague, of which a number of cases have been reported. Reports had been spread among the natives that the health officers were poisoning their countrymen in the hospitals, taking out the eyes of babies by electricity, etc. Attacks upon the sanitary officers followed, and in the fighting which ensued several persons were badly injured.

Dirt and Ice Cream.—Out of fifty-one ice cream factories in New Jersey inspected during the past year only fifteen were found to meet with the requirements of the law, according to a statement made at the recent meeting of of the National Association of Ice Cream Manufacturers by the Chief of the Division of Dairies of New Jersey. Ice cream plants were found in operation in cellars and dwelling houses, with no protection against contamination. In only ten were there sterilizing equipments.

When attempting to loosen with a hook a foreign body almost or quite obstructing the auditory canal the passage of the instrument along the antero-inferior aspect of the canal involves the least risk to the drum membrane.—Amer. Jour. of Surg.

The eleventh annual Misosuri State Conference of Charities and Corrections met at Chillicothe, November 10. Affiliating organizations meeting at the same time were: the Missouri Association for Relief and Control of Tuberculosis the Missouri Association for the Prevention of Blindness and the St. Louis Society for Sanitary and Moral Prophylaxis.

Typhoid Fever at Annapolis.—An epidemic of typhoid fever at the Naval Academy has caused the authorities to make a test of anti-typhoid inoculation on all midshipmen willing to submit to it. The source of the epidemic, which has been confined to the Academy, no cases appearing in the town, has not yet been determined. The water supply of the Naval Academy is obtained from artesian wells.

Health in the Canal Zone.—Colonel Goethals, chief engineer in charge of the Panama Canal, has reported to the Secretary of War that health conditions on the isthmus are much improved over those of the preceding year, and no cases of plague or yellow fever originated on the isthmus during the year. The daily average of sick was 23 out of every thousand employed, as against 23.9 during the preceding year, and the total number of deaths among employees was 58, equivalent to an average of 10.8 per thousand.

Vaccination in North Carolina.—The Wilmington, N. C., city superintendent of health, at a recent session of the local health board, said that as he understood it there is a State law requiring that all school children be vaccinated and that he had been reliably informed that there were children in the Wilmington schools who have not been vaccinated but have certificates from their physician that they are not in physical condition to be vaccinated. He stated further that in his opinion a child who is not physically able to be vaccinated is not in condition to attend school. The city superintendent of health was then instructed to write the school authorities that all children must show certificates of vaccination or they will not be permitted to attend school.

The American Society of Medical Sociology.—Recognizing the intimate relationship between disease and the social-economic system under which we live, recognizing that many diseases are caused directly by our social and economic conditions, recognizing that the efficiency or inefficiency of our treatment often depends upon the economic condition of the patient, recognizing that there are many problems deeply and vitally affecting the welfare of mankind which are left practically untouched by any existing medical society, The American Society of Medical Sociology has been organized for the purpose of studying radically all questions of a socio-medical nature, and invites your co-operation. Some of the questions which are under investigation by the members at the present time are:

The need of a Federal Department of Health.

Tuberculosis as an economic disease.

Is there any demonstrable relationship between the strain of our modern life and the increase of insanity?

Is cancer on the increase, and if so, what are the probable etiologic factors?

What are the best, i.e., the most humane and most effective methods of dealing with prostitution?

The best methods of preventing venereal infection?

Is complete sexual abstinence (a) likely to impair the general health? (b) likely to result in impotence?

The relative influence of heredity and environment on the physical, mental and moral characteristics of the offspring.

The question of marriage and divorce.

Is the regulation of conception morally justifiable, and if so, what are the best methods?

Abortion in its medical and ethical aspects.

Alcohol (a) as a beverage, (b) as a medicine. Its physiologic, medicinal, social and economic effects.

Infant mortality. Its principal causes and prevention.

Occupational or trade diseases.

Food adulterations and their influence on health.

The causes of quackery, Christian science and other cults and, the influence of the irregular cults of medicine on public health.

The results of these investigations will be disseminated by means of meetings, lectures, reports, pamphlets, etc. If you are or wish to become an earnest student of socio-medical questions and wish to join the society make written application to The American Society of Medical Sociology, 12 Mt. Morris Park W., New York.

THE MEDICAL FORTNIGHTLY

A Cosmopolitan Biweekly for the General Practitioner

The Medical Fortnightly is devoted to the progress of the Practice and Science of Medicine and Surgery. Its aim is to present topics of interest and importance to physicians, and to this end, in addition to a well-selected corps of Department Editors, it has secured correspondents in the leading medical centers of Europe and America. Contributions of a scentific nature, and original in character, solicited. News of Societies, and of interesting medical topics, cordially invited.

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Contributions and books for review should be addressed to the Managing Editor, 319 and 320 Century Building, St. Louis, Mo.

CORRESPONDENCE

A CORRECTION.

Quincy, Ill., Nov. 26, 1910.

Dr. Thomas A. Hopkins. St. Louis, Mo.

My attention has been called to printer's error or careless proof reading on my part, in my article on "Pleural Effusions" in the Fortnightly of November 10th. Near the bottom of page 434, instead of a hyphen, a comma is inserted between arsenic and free, which error has the possibility of harm to some one.

Will you kindly insert a correction in an early issue of the journal, and oblige,

Very truly yours,

E. B. MONTGOMERY.

THE ITINERANT VENDOR OF MEDICINES.

To the Editor:

Will you kindly publish the following communication, or as much of it, as practicable, for the information and guidance of all concerned, especially itinerant vendors, some of whom are plying their trade in ignorance of their violation of the law.

JAMES A. EGAN, M. D.,
Secretary Illinois State Board of Health.

To State's Attorney and Other Attorneys of the Illinois State Board of Health:

Gentlemen:—I enclose for your information and guidance, a copy of the recent opinion of the Supreme Court of Illinois, in the case of People for use State Board of Health vs. J. A. Wilson, an itinerant vendor of drugs, who represented the George H. Rundle Company of Piqua, Ohlo, and operated in Kankakee county.

As you will note, the Supreme Court, has, once more, affirmed the constitutionality of section 8 of the medical practice act of 1899 (An Act to Regulate the Practice of Medicine in the State of Illinois, approved April 24, 1899) and has, once for all, disposed of the contention so frequently made of late, that section 8 was repealed by the pharmacy act of 1901, especially in view of the expressed opinion of the court in the case of Noel vs. People, 187 Ill., 578.

Most important, however, is the court's ruling that the evidence presented on the part of the People "made out a case against appellee as an itinerant vendor of a nostrum in violation of the statutes."

In view of this ruling, it is evident that any itinerant vendor of any drug or nostrum, who sells a drug or nostrum, on the label of which or on circulars accompanying, there appear statements exploiting the virtues of the drug or nostrum as a cure for disease, with directions for use, violates the statutes.

It would appear, consequently, that it is only necessary for the People to prove that a sale such as described was actually made, and that the purchaser would be the only witness necessary.

It would appear, also, that this ruling of the court clearly defines who is an itinerant vendor, under the provisions of section 8, and sets at rest the question as to whether a medicine company or its agent who made the sales, is required to take out a license, and is liable for violation of section 8.

As you will recall, the court in the case of Watkins Medical Company vs. Paul (87 Ill. App., 278), opinion filed February 1, 1900, held that the medical company by which the actual vendor was employed, was the seller, and that under the statutes, it was required to take out a license.

But the same court, in an opinion filed later—March 14, 1904—(Rose Cooperman vs. People, 113 Ill. App., 99) held that a person who traveled around a city, selling medicine as the agent of a medicine company, and to which company she sent the orders, and from which company she received the goods and delivered them to customers, without a license so to do, came within section 8 of the medical practice act.

It will be of interest to you that in the brief of appellee in the case of People vs. Wilson, it was contended that the medicine company ought to be the defendent in the cause, and the case of Watkins Medical Company vs. Paul was cited as authority. But the court, seemingly, did not deem this point worthy of consideration.

The State Board of Health would be pleased to have you bring suits against all itinerant vendors of drugs or nostrums, operating within your county. Proper authorizations will be sent you on request. The itinerant medicine vendor, as his practice is now carried on, is a decided menace to the health and well being of the people.

Very truly yours,

J. A. EGAN, Secretary.